

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows.

1. (Currently Amended) A system comprising:

a plurality of nodes housed within a single computer having a plurality of processors, wherein the plurality of nodes comprises a first subset of nodes having a first node and a second subset of nodes having a second node; and

a mesh interconnect, located within the single computer, connecting the plurality of nodes, wherein ~~the~~ [[a]] ~~first node selected from the plurality of nodes~~ comprises a first router for interfacing with the plurality of nodes using the mesh interconnect and a first replicated service executing on a first operating system of the first node,

wherein ~~the~~ [[a]] ~~second node selected from the plurality of nodes~~ comprises a second router for interfacing with the plurality of nodes using the mesh interconnect and a second replicated service executing on a second operating system of the second node, and

wherein the first node is configured to:

generate, in response to the first replicated service being unavailable, a first request to replace the first replicated service, wherein the first request specifies the first subset of nodes,

send the first request to replace the first replicated service to the ~~plurality~~ first subset of nodes using the mesh interconnect,

generate, after determining the first subset of nodes does not comprise a replacement for the first replicated service, a second request to replace the first replicated service, wherein the second request specifies the second subset of nodes,

send the second request to replace the first replicated service to the second subset of nodes using the mesh interconnect,

receive a response to the second request from the second node indicating the second node comprises a replacement for the first replicated service,

receive, after receiving the response from the second node, a request for the first replicated service from a third node of the plurality of nodes, and

route, based on the response and using a master-less routing policy implemented by the first router, the request for the first replicated service from the third node to the second node. ~~[[.]] wherein the plurality of nodes comprises a first subset of nodes and a second subset of nodes, wherein the first node is in the first subset and the second node is in the second subset, and wherein the first node is configured to send the request to the second subset of nodes only when the first subset of nodes cannot replace the first replicated service [[.]]~~

2. (Canceled)
3. (Previously Presented) The system of claim 1, wherein the second node comprises a cache indicating that the second replicated service is available, and wherein the second node is configured to generate the response based on the cache.
4. (Original) The system of claim 1, wherein the first router comprises a lightweight communications protocol.
5. (Previously Presented) The system of claim 1, wherein the first router comprises a heavy-weight communications protocol.
6. (Original) The system of claim 1, wherein the mesh interconnect provides at least two connection paths from the first node to the second node.
7. (Previously Presented) The system of claim 1, wherein the first replicated service is a different application than the second replicated service.
8. (Canceled)
9. (Canceled)

10. (Previously Presented) The system of claim 1, wherein the first node is configured to send the first request using at least one selected from a group consisting of a broadcast message and a multicast message.
11. —25. (Canceled)
26. (Previously Presented) The system of claim 3, wherein the cache comprises a table having entries for each replicated service provided by the second node.
27. (Previously Presented) The system of claim 1, wherein the first replicated service is unavailable when the first replicated service is busy.
28. (Previously Presented) The system of claim 1, wherein the first replicated service is unavailable when the first replicated service has failed.
29. (Canceled)
30. (Previously Presented) The system of claim 28, wherein the first replicated service has failed due to a security hole being exploited by a hacker, and wherein the second replicated service does not include the security hole.
31. (Previously Presented) The system of claim 1, wherein the first operating system is different than the second operating system.
32. (Canceled)

33. (Currently Amended) A method for managing replicated services, comprising:

generating, by a first node selected from a plurality of nodes, a first request to replace a first replicated service of the first node when the first replicated service is unavailable, wherein the plurality of nodes comprises a first subset of nodes including the first node and a second subset of nodes, wherein the first request specifies the first subset of nodes, and wherein the plurality of nodes is housed within a single computer having a plurality of processors and connected using a mesh interconnect;

sending, by the first node, the first request to the ~~plurality~~ first subset of nodes using the mesh interconnect;

generating, after determining the first subset of nodes does not comprise a replacement for the first replicated service, a second request to replace the first replicated service, wherein the second request specifies the second subset of nodes,

sending, by the first node, the second request to replace the first replicated service to the second subset of nodes using the mesh interconnect,

receiving, at the first node, a response from a second node ~~selected from~~ of the ~~plurality~~ second subset of nodes indicating the second node comprises a replacement for the first replicated service;

receiving, at the first node and after receiving the response from the second node, a request from a third node of the plurality of nodes for the first replicated service; and

routing, at the first node using a master-less routing policy implemented by a router of the first node, the request from the third node to the second node based on the response, ~~[[.]] wherein the plurality of nodes comprises a first subset of nodes and a second subset of nodes, wherein the first node is in the first subset and the second node is in the second subset, and where sending the request to the plurality of nodes comprises: sending the request to the first subset of nodes; and sending the request to the second subset of nodes when the first subset of nodes cannot replace the first replicated service [[.]]~~

34. (Canceled)

35. (Currently Amended) A system comprising:

- a first node of a first subset of nodes comprising a first router, and a first application executing on a first operating system for performing a replicated service [[,]] and a cache table having an entry indicating an availability of the service on the first node;
- a second node of a second subset of nodes comprising a second router, [[and]] a second application executing on a second operating system for performing the replicated service, and a cache table having an entry indicating an availability of the replicated service on the second node wherein the second node is configured to send a request to replace the service to the node after failure of the second application; and
- a mesh interconnect connecting [[a]] the first subset of nodes and the second subset of nodes, plurality of nodes including the first node and the second node, wherein the first node is configured to examine the entry in the cache based on the request to replace the service, and send a response to the second node using the mesh interconnect;

wherein the ~~second~~ first node is configured to:

- generate, in response to the replicated service being unavailable, a first request to replace the replicated service, wherein the first request specifies the first subset of nodes,
- send the first request to replace the replicated service to the first subset of nodes using the mesh interconnect,
- generate, after determining the first subset of nodes does not comprise a replacement for the replicated service, a second request to replace the replicated service, wherein the second request specifies the second subset of nodes,
- send the second request to replace the replicated service to the second subset of nodes using the mesh interconnect,
- receive [[the]] a response to the second request from the [[first]] second node indicating the second node comprises a replacement for the replicated service,

receive, ~~after receiving the response from the second node,~~ a third request for the replicated service from a third node ~~after receiving the response from the first node,~~ and

route, based on the response and using a master-less routing policy implemented by the first ~~second~~ router, the third request for the replicated service from the third node to the second ~~[[first]]~~ node,

wherein the second node is configured to examine the entry in the cache based on the second request to replace the service, and send the response to the first node using the mesh interconnect,

wherein the first node, the second node, the third node, and the mesh interconnect are housed within a single computer having a plurality of processors, and wherein the first application is different than the second application.

36. (Canceled)

37. (Canceled)

38. (Previously Presented) The system of claim 35, wherein the second application has failed due to a security hole being exploited by a hacker, and wherein the first application does not include the security hole.